

TFA IMAGE SENSOR WITH STABILITY-OPTIMIZED PHOTODIODE

Abstract

The invention relates to a TFA image sensor with stability-optimized photodiode for converting electromagnetic radiation into an intensity-dependent photocurrent with an intermetal dielectric, on which, in the region of the pixel matrix, a lower barrier layer (metal 2) is situated and a conductive layer (metal 2) is situated on said barrier layer, and vias being provided for the contact connection to the ASIC, said vias in metal contacts on the ASIC.

The invention is based on the object of providing a TFA image sensor having improved electrical properties. This is achieved in that an intrinsic absorption layer (i) is provided between the TCO layer and the barrier layer (metal 2) with a layer thickness of between 300 nm and 600 nm. Before the application of the photodiodes, the topmost, comparatively thick metal layer of the ASIC is removed and replaced by a matrix of thin metal electrodes which form the back electrodes of the photodiodes, said matrix being patterned in the pixel raster. (Figure 11)